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RISK CONTROL TECHNIQUES AND AIRCRAFT PASSENGERS' CONFIDENCE AMONG SELECTED AIRLINERS IN MURTALA MUHAMMED INTERNATIONAL AIRPORT, LAGOS, NIGERIA

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Abstract *This study explored the relationship between risk control techniques and the confidence of aircraft passengers among selected airlines operating at Murtala Muhammed International Airport (MMIA) in Lagos, Nigeria. The research specifically assessed the ranking of risk control techniques utilized by airlines, evaluated the ranking of passengers' accessibility, usability, and confidence, and examined the impact of risk control techniques on passengers' confidence in air travel. A survey research design was chosen due to its predictive capability and its effectiveness in collecting perceptions from a large population. Data were gathered through structured questionnaires distributed to airline personnel and passengers from four selected airlinesArik Air, Air Peace, Ibom Air, and Value Jet. Utilizing Cochran's formula, a sample size of 384 respondents was calculated, from which 325 valid responses were analysed.For data analysis, descriptive statistics, Friedman's rank test, analysis of variance, and simple regression analysis were employed. The findings revealed a statistically significant difference in the rank order of risk control techniques, with risk minimization ranked highest, followed by risk avoidance, risk transfer, and risk retention. Similarly, significant variations were found in passengers' accessibility, usability, and confidence, with accessibility ranked highest. Regression results indicated a positive and statistically significant relationship between risk control techniques and aircraft passengers' confidence, with these techniques accounting for approximately 15.7% of the variation in passengers' confidence. This suggests that while risk control measures are vital, other factors also affect passenger confidence. The study concludes that effective implementation of risk control techniques can enhance passengers' confidence in air travel.*

Recommendations include ongoing safety training for airline personnel, transparent communication of safety measures, the adoption of advanced safety management systems, and stricter regulatory oversight by aviation authorities. This study contributes to the existing body of knowledge by empirically linking risk control techniques with passenger confidence in the context of a developing aviation industry, thereby providing evidence-based insights for improving safety management and fostering passenger trust within Nigeria's aviation sector.

Keywords Risk control techniques, aircraft passengers' confidence. Safety management, Lagos

Introduction

Risk control strategies are essential components of aviation safety management systems, designed to identify hazards and implement procedures to mitigate or eliminate risks to acceptable levels (Howell, 2025). In the realm of commercial aviation, these measures encompass technical controls, operating procedures, crew training, and regulatory compliance, all aimed at safeguarding both passengers and crew members (AI-Dmour et al., 2025). Beyond merely preventing accidents, effective risk handling enhances the overall quality of the passenger experience by ensuring predictable, secure, and well-regulated aircraft operations (Shafieenejad et al., 2023). Li et al. (2025) emphasised the importance of proactive safety measures that are seamlessly integrated into routine airline operations to maintain public confidence in and access to air travel.

Air travel is widely recognized as the safest mode of transportation, with an annual average injury rate of just 0.01 per 100 million passenger miles. In contrast, land transportation reports a significantly higher injury rate of 48 injuries per 100 million passenger miles traveled (USAFacts Team, 2023). This data highlights the aviation industry's impressive safety standards, achieved through the ongoing efforts of manufacturers, airlines, governments, and regulatory bodies. However, public perceptions of safety often focus on in-flight operations, overlooking critical ground procedures such as taxiing (Kemik et al., 2025). While taxiing may seem like a routine activity, its complex nature and the interactions among various stakeholdersincluding pilots, air traffic controllers, cabin crew, and passengerspresent unique safety challenges. Currently, human risk factors converge with issues like ground traffic and scheduling, emphasising the need to prioritise ground operations within safety management frameworks for Airport's accessibility and usability (Choi, 2023; Naveen et al., 2024).

Passenger accessibility and usability are widely recognized as crucial components in the effective implementation of policies for managing aviation risk (Wingelaar-Jagt et al., 2021). Accessibility ensures that the

aircraft environment, safety information, and onboard services are usable by all passengers, including those with disabilities, senior citizens, and individuals with limited travel experience (Gotti et al., 2024). Usability focuses on how passengers can understand and interact with cabin layouts, safety equipment, signage, and in-flight devices (Kim & Lee, 2022). Studies (such as Kim & Lee, 2022; Lee et al., 2024; Li et al., 2025) show that intuitive and inclusive safety systems and cabin designs improve passenger compliance with safety instructions and enhance appropriate responses during abnormal or emergency situations, thereby reducing human-related risks

Passenger confidence is a crucial psychological result shaped by the interplay of risk management measures, accessibility, and usefulness (Deng et al., 2025). However, confidence signifies passengers' reliance on an airline's capacity to properly mitigate safety hazards and ensure a secure travel environment. Effective communication, evident safety protocols, and intuitive aircraft designs substantially influence passengers' perceptions of safety and control (Eshaghi et al., 2024; Manca et al., 2023). Variations in the implementation of risk control measures among chosen commercial airlines may affect passengers' trust and overall happiness. Consequently, analyzing the impact of risk control measures on passengers' accessibility, usability, and confidence yields significant insights for refining safety management practices and augmenting customer-centric service delivery within the aviation sector (Alli, 2025; Shafieenejad et al., 2023). The study's objectives are to determine if there is a rank order effect of risk control techniques among selected Airliners in Murtala Muhammed International Airport, Lagos; find out if there is a rank order effect of aircraft passengers'' accessibility, usability, and confidence among selected Airliners in Murtala Muhammed International Airport, Lagos; and assess the effect of risk control techniques on aircraft passengers' confidence among selected Airliners in Murtala Muhammed International Airport, Lagos.

Literature review

Risk Control Techniques and Aircraft Passengers' Safety

Risk control techniques are essential for guaranteeing the safety of airline passengers, given that aviation operations are intrinsically subject to operational, technological, and human-related risks (Li et al., 2025). Risk control in aviation entails a systematic methodology within a Safety Management System (SMS) aimed at mitigating potential incidents, encompassing risk avoidance, reduction, transfer, assumption, and segregation of exposure, executed through targeted technical, operational, and human-factors controls (AI-Dmour et al., 2025; Okine et al., 2026).

Wong and Pawlick (2025) assert that accidents transpire when several layers of defense fail concurrently, underscoring the necessity of proactive risk identification and mitigation measures. The aviation sector extensively employs risk control methodologies, including safety management systems (SMS), hazard identification, and risk assessment tools, to

reduce the probability of accidents and incidents (Shafieenejad et al., 2023; Stroeve et al., 2022). Studies (e.g., Halawi et al., 2024; Howell, 2025; Newaz et al., 2025) underscores that structured risk management allows airlines to systematically identify hazards and implement controls prior to the escalation of risks into safety threats. These strategies mitigate human error, improve operational reliability, and reinforce safety barriers that safeguard passengers.

Empirical research (e.g., Muecklich et al., 2023; Halawi et al., 2024; Okine et al., 2026) has demonstrated a strong correlation between effective risk management strategies and improved passenger safety outcomes. They argue that human factors risk management, which includes crew resource management (CRM) and fatigue risk management systems, significantly reduces aviation accidents caused by human error. Additionally, technical risk management strategies, such as advanced avionics, automated alert systems, and predictive maintenance, have proven effective in enhancing situational awareness and reducing mechanical failures (Dangut et al., 2023; Kabashkin& Perekrestov, 2024). These practices not only improve flight safety but also enhance passenger confidence by ensuring consistent adherence to safety regulations across airline operations.

Aircraft Passengers' Confidence

Passenger confidence in air travel has been significantly shaped by perceptions of safety, operational reliability, and service quality, especially during global crises such as the COVID-19 pandemic (Budd et al., 2021; Sun et al., 2023). Research (e.g., Budd et al., 2021; Kioulepoglou, 2023) suggests that trust is not solely dependent on objective safety records but is also influenced by personal and situational factors, including health concerns, past flying experiences, and demographic characteristics. Additionally, sentiment analyses of passenger reviews conducted both before and after major disruptions show that interactions with airline personnel and perceptions of cleanliness have a considerable effect on travelers' satisfaction and trust, thereby influencing their overall confidence in choosing air travel (Avgan & Özdemir, 2025; Zahraee et al., 2025).

In addition to health-related issues, technology and service quality factors are becoming key determinants of passenger confidence in aviation (Tahanisa&Shokuhyar, 2020). Research (e.g., Badrillah et al., 2025; Sun et al., 2023) examined digital transformation and innovation, indicating that the integration of advanced technologies, such as artificial intelligence, for operational efficiency can improve perceptions of safety and reliability; however, trust in autonomous systems differs among passenger demographics. Furthermore, the perceived quality of service throughout the travel experience, encompassing customer service and management of irregular operations, has been demonstrated to have a positive correlation with passengers' propensity to re-fly, which illustrates the importance of both human and systemic factors in fostering confidence (Avgan & Özdemir, 2025). These findings underscore that passenger confidence is

complex, shaped by psychological perceptions of safety and concrete service outcomes, necessitating cohesive strategies from airline management to enhance trust in air travel.

Theoretical Framework

Risk Perception Theory elucidates that humans assess hazards subjectively rather than exclusively depending on statistical probabilities, highlighting that perceptions are influenced by psychological, social, and cultural aspects (Lu, 2025). Globig et al. (2022) assert that individuals evaluate risks through qualitative factors like dread, familiarity, controllability, and catastrophic potential. These aspects affect the perception of a danger as either acceptable or worrisome, frequently resulting in divergences between expert evaluations and public opinions. In the realm of air travel, passengers may regard aviation-related hazards as significant despite its robust safety record, especially when such risks involve involuntary exposure, uncertainty, or possible catastrophic consequences. Consequently, passengers' confidence is influenced not just by actual safety performance but also by the framing, communication, and experience of risks throughout the travel process (Looti, 2025).

Recent advancements in risk perception theory emphasise the value of trust and the transparency of control methods in alleviating perceived risk. Previous studies (e.g., Halawi et al., 2024; Shafieenejad et al., 2023) demonstrate that explicit communication and observable safety protocols enhance perceptions of controllability and competence, which are essential factors influencing risk acceptance. In aviation environments, particularly in bustling international airports, the effective execution and communication of risk control measures can function as psychological reassurance mechanisms, bolstering passengers' confidence and propensity to travel (Kierzkowaki et al., 2024; Zeballos et al., 2023).

Empirical Review

Omokiti and Oyedepo (2021) investigated communication as a verbal and non-verbal instrument for human requirement. This study assessed airline communication matters and the airline traveling experience in Nigeria. The study used structured questionnaire supported with quantitative approach for data analysis. The study concluded with the choice of twitter by Arik and Dana as the best in Nigeria. The study noted that aviation industry in Nigeria was motivated to invest in the modern iteration towards digital communication hence they contribute positively to passenger motivation and satisfaction.

Aiyegbajeje (2023) evaluated the choice determinant of airline among domestic air travelers in Lagos, Nigeria. The study’s objectives were to assess the determining factors influence on local air passengers’ choice of airline in Lagos State, Nigeria; with focus placed on air passengers demographic profiles, airline service quality ranking, and passengers’ choice determinants. A structured questionnaire was adopted with data gathering from 352 passengers cum

systematic random sampling technique; using the departure and arrival lounge of the local wing of Murtala Muhammed International Airport terminal 2 (MM 2) in Lagos State. The finding showcased that while Air Peace was ranked first, Max Air was ranked second among topmost ten operational airlines. The choice of passengers was hypothetically indicated by passenger airfare and route availability for the local airlines. The study recommended long-term strategies as options for domestic airlines towards the provision of sustainable airline service.

Adedeji (2024) examined the rethinking of federal airports remodeling for passenger safety and security in achieving the millennium goal of the industry. The study adopted structural functionalism cum theoretical framework. With the assistance of quantitative analysis and structured questionnaire, finding revealed that successive governments in Nigeria have made significant financial investments in the aviation industry in terms of improving travel condition, creating employment opportunity, creating passenger safety, efficiency, and confidence. The study recommended sufficient funds provision, efficient human capital, unity of purpose among staff and critical modern infrastructural provisions. The study concluded with well-organised and efficacious safety supervision process for economic benefits of Air Transport International (ATI) investments.

Adenigbo et al. (2025) examined factors influencing efficient cargo logistics management, with Murtala Muhammed International airport, as focus area in Lagos, Nigeria. The study adopted quantitative approach cum survey design. A well-structured questionnaire was designed and data were gathered with the support of random sampling technique. Both exploratory and confirmatory factor analysis were employed in the data analysis, which identified traffic flow, bureaucracy, malpractices, and equipment as major significant factors affecting cargo logistics management around the airport. Findings noted the necessity for incorporating real-time automation in the cargo processing with enhancing equipment provision that will improve airport capacity for cargo efficiency in Nigeria. Another finding revealed that bureaucracy and malpractices were major setbacks for cargo supply chains. The study suggested strategic options to enhancing airport cargo operations.

Research Methods

This study utilized a survey design. Its participation was due to its predictive capability (Creswell & Creswell, 2018) and the capacity to get information regarding all sample instances (Gray, 2017). The approach was adopted due to its facilitation of accessibility for researchers to interrogate and deliberate on topics with respondents (Wilson, 2014). The structured questionnaires were utilized according to a methodology established in the research by Caliendo, Fossen, and Kritikos (2008). The participants' perceptions of each other's intentions regarding the topics at hand were utilized to improve the scheduled interview exercise through five Likert scale measurements. Airline customers are facing challenges due to insufficient accessibility and reduced confidence in airports amid the nation's security issues. Personnel from various units interacting

with passengers were interviewed at the airport to assist in data collection. The study employed convenience sampling methods to gather information.

The target audience for this study comprises personnel directly associated with local airlines at Murtala Mohammed International Airport (MMIA). This include officials from the airlines, passengers, and other parties involved in local transit at MM1 and MM2. The sample size for this study is calculated using Cochran's formula, appropriate for huge or infinite populations. The equation is articulated as:

$$\mathbf{n0} = \frac{(\mathbf{Z^2} * \mathbf{p} * \mathbf{q})}{\mathbf{e^2}}$$

This selection strategy is deemed objective as it provides equal opportunity for selection among members of the target population (Bryman & Bell, 2023). The Cochran sampling size determination method was utilized to choose 384 respondents from the target population. The questionnaires were uniformly distributed among the four selected airlines, as indicated in Table 1. Of the three hundred eighty-four copies distributed, three hundred twenty-five (325) were returned and utilized for the analysis.

Table 1: Questionnaire Distributions Pattern

S/N	AIRLINES	NO OF ADMINISTERED QUESTIONNAIRE	NO OF RETURNED
1	Arik Air	96	74
2	Air Peace	96	75
3	Ibom Air	96	96
4	Value Jet	96	80
	Total	**384**	**325**

Source: Researchers Compilation 2025

A structured questionnaire served as the instrument for data collection. The questionnaire's contents were primarily derived from the study's objectives. The questionnaire has three sections addressing the research questions. Section A of the questionnaire addresses the socio-economic background of the respondents. Section B1 was based on a 5-point Likert scale pertaining to risk management approaches. The scale extends from Strongly Disagree (SD) to Strongly Agree (SA). Section B2 focused on risk assessment procedures, whereas Section B3 aimed to examine risk control strategies. Section C, however, examines the accessibility, usability, and confidence of airplane passengers in utilizing an airline.

Descriptive statistics (Tables, Charts, Mean, and Standard Deviation) and inferential statistics (Analysis of Variance and Multinomial Regression) were employed to analyze the data collected from the field. Descriptive analysis was employed to examine the socio-economic background of the respondents and

objective 1, whereas multinomial regression and ANOVA were utilized for objective 2. The Friedman test and simple regression were utilised to analyze the proposed hypothesis.

4 RESULTS AND DISCUSSION OF FINDINGS

4.1. Analytical Descriptions of Participants Opinions

Table 1: Participants' Bio-Data Information

Variable	Response Label	Frequency	Percentages (%)
Gender	Male	176	54.2
	Female	149	45.8
Age	18 but less than 30	45	13.8
	30 but less than 40	194	59.7
	40 but less than 50	52	16.0
	50 but less than 60	32	9.8
	60 and above	02	0.7
Educational Qualifications	Bachelor's degree/HND	133	40.9
	Master's Degree	168	51.7
	Doctoral Degree	04	1.2
	Professional Certificate	10	3.1
	Others	10	3.1
Passengers' understanding of aircraft passengers' liability insurance	Not at all	11	3.4
	Fair	101	31.1
	Average	119	36.6
	High	94	28.9
Passengers' knowledge of possible risks confronting aircraft while onboard	Not at all	15	4.6
	Fair	43	13.2
	Average	116	35.7
	High	151	46.5

Source: *field survey (2025)*

The data presented in Table 1 provides insights into various demographic variables. These statistics offer a sight into the configuration of the surveyed population, allowing for valuable observations and implications. The gender distribution reveals it is moderately skewed towards males, constituting 54.2 percent of the sample compared to 45.8percent of females. This gender disparity might not have a huge influence on various aspects, potentially affecting responses and attitudes towards the survey's subject matter. Regarding age demographics, the data illustrates high percentages with regard to those aged 30 but less than 40 year with 59.7 percent. It was followed by those aged 40 but less than 50 years with 16 percent, 18 but less than 30 years 13.8 percent while 9.8 percent and 0.7 percent were recorded for those aged 50 but less than 60 years and 60 years and above. The responses from the participants are indications of maturity encompassing their opinions regarding the subject matter. Educational qualifications showcase a notable distribution, with the majority (51.7 percent) holding a master's degree. 40.9 percent was recorded for BSc/HND. While 1.2 percent was recorded for those holding doctorate degrees, 3.1 percent was project respectively for professional certificate holders and others.

These responses indicated high percentage to be well-educated sample population, potentially indicating a higher level of expertise among respondents. For Passengers' understanding of aircraft passengers' liability insurance, majority were said to have average understanding in terms of aircraft passengers' liability insurance. For Passengers' knowledge of possible risks confronting aircraft while onboard, high-level responses were gathered.

4.2. Descriptive Analysis of Research Variables

Table 2: Risk Control Techniques

Variables	Scale Level					Mean	Std Dev.
	SD	D	U	A	SA		
	1	2	3	4	5		
Physical avoidance of aircraft risk (such as standard speed limit, vehicle inspection, etc.) is important among airliners for the safety of their passengers (*risk avoidance*)	9.8	7.4	1.8	53.2	27.8	3.82	1.203
Aircraft risk reduction techniques (such as provisions of fire extinguishers, airbags, seatbelts, etc.) are necessary for air passengers' safety compliance (*risk minimization*)	3.7	1.8	3.1	48.0	43.4	4.26	.899
Setting funds aside for managing aircraft-related risks by aircraft operators will help air safety compliance (*risk retention)*	14.8	7.1	16.9	34.8	26.4	3.51	1.346
Risk transfer such as aircraft passengers' liability insurance policies are necessary for air traveling safety compliance (*insurance – risk transfer*)	8.0	8.3	18.4	27.1	38.2	4.57	.593

Source: Researchers' Computations, 2025

In Table 2 (Fig. 1), survey items projecting risk control techniques include risk avoidance*, risk minimisation, risk retention, and risk transfer*. The responses from the participants that participated in this study showed that majority, in references to *risk avoidance (81.0%), risk minimisation (91.4%), risk retention (61.2%), and risk transfer (65.3%)* all agreed. For contrasting view, the following were noticed for the survey items *risk avoidance (17.2%), risk minimisation (5.5%), risk retention (21.9%), and risk transfer (16.3%)*. For participants' views expressing their indecision, the following were recorded *risk avoidance (1.8%), risk minimisation (3.1%), risk retention (16.9%), and risk transfer (18.4%)*. The mean scores and that of standard deviation agreed with the results. The outcomes imply that risk control techniques plainly indicate the similar decisions regarding all subject areas in the distribution.

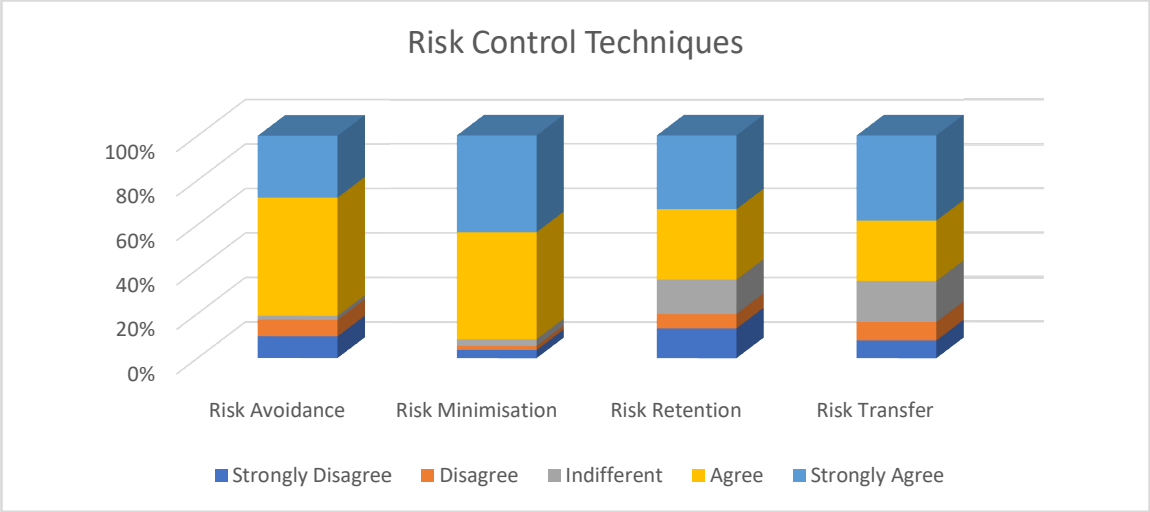


Fig. 1: The graphical model explains the risk control techniques among selected Airliners in Murtala Muhammed International Airport,Lagos

Table 3: Aircraft Passengers' Accessibility, Usability and Confidence

Variables	Scale Level					Mean	Std Dev.
	SD	D	U	A	SA		
	1	2	3	4	5		
Airliners' sensibility to risk control in Nigeria has reduced the passengers' access always to air transportation (accessibility)	10.8	8.3	12.3	40.0	28.6	4.46	.780
Most passengers are readily interested in the usage of air transportation due to high level risks attached to aircraft in Nigeria (Usability)	16.9	18.2	12.9	28.6	23.4	3.23	1.425
Most passengers' confidence in air transportation in Nigeria is declining due to high level of risks encountered often by aircraft operators (Confidence)	19.7	9.2	17.5	32.0	21.5	3.26	1.413

Source: Researchers' Computations, 2025

In Table 3 (Fig. 2), survey items projecting aircraft passengers' accessibility, usability, and confidence. The responses from the participants that participated in this study showcased that majority, in reference to *accessibility (68.6%), usability (52%), and confidence (53.6%)* all agreed. For contrasting view, the following were noticed for the survey items *accessibility (19.1%), usability (35.1%), and confidence (28.9%)*. For participants' views expressing their indecision, the following were recorded *accessibility (12.3%), usability (12.9%), and confidence (17.5%)*. The mean scores and that of standard deviation agreed with the results. The outcomes imply that risk control techniques plainly indicate the similar decisions regarding all subject areas in the distribution.

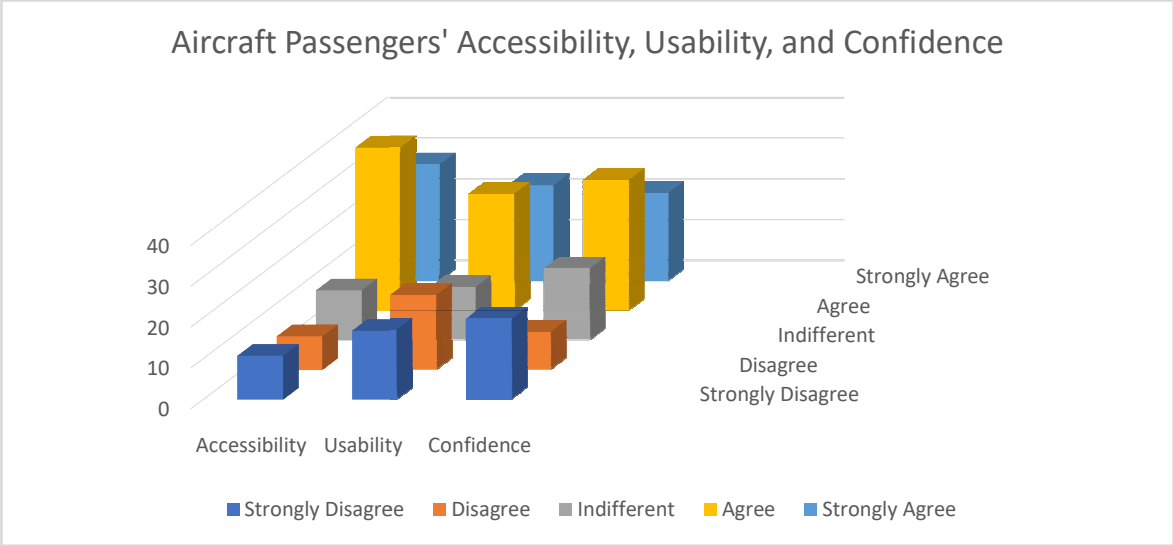


Fig. 2: The graphical model explains the Aircraft Passengers Accessibility, Usability, and Confidence among selected Airliners in Murtala Muhammed International Airport, Lagos

4.3 Test of Hypotheses

4.3.1 Friedman's Rank Test

This symbiotic analysis test, expressed by K, evaluates a universe that is regularly sampled and has the identical median. It presumes, in a hypothetical state where there is no impact, that the response variable follows a persistent distribution, necessitating at least ranked measurement (Eisinga et al., 2017). Data under this test is coordinated in a tabular representation with 'n' rows and 'k' columns. This test dictates if the combined rank consequences for each condition notably differ from the forecasted approximations (St. Laurent & Turk, 2013).

Ho_1: There is no rank order analysis for risk control techniques among selected Airliners in Murtala Muhammed International Airport, Lagos

Table 4: Results of Friedman's Rank Test on risk control techniques among selectedairliners in Murtala Muhammed International Airport

S/N	Survey Items	Mean Rank	Rank
1.	Risk Avoidance	2.52	2
2.	Risk Minimisation	2.90	1
3.	Risk Retention	2.16	4
4.	Risk Transfer	2.41	3

Source: Researchers' Computations, 2025

Table 5: Chi-Square Results from the Friedman's Test

N	325
Chi-Square	69.616
Df	3
Asymp.sig.	.000

a. Friedman Test

The outcome of analysis from the abovemark the existence of a statistically significant variance in aircraft risk control techniques[risk avoidance, risk minimisation, risk retention, and risk transfer; X^2 (3, n=325) = 69.616, p < 0.05]. Importantly, careful examination of the mean estimations indicated a slopy layer in risk control techniques adopted among selected airliners in Murtala Muhammed International Airport from risk minimisation (2.90) to risk avoidance (2.52) to risk transfer (2.41) to risk retention (2.16). The significance of these criteria making up therisk control techniques adopted among selected airliners in Murtala Muhammed International Airport were plainly ranked to give grounds for the aboveclarifications.

Ho_2: There is no rank order analysis for aircraft passengers'' accessibility, usability, and confidence among selected Airliners in Murtala Muhammed International Airport, Lagos

Table 6: Results of Friedman's Rank Test on aircraft passengers'' accessibility, usability, and confidence among selected Airliners in Murtala Muhammed International Airport, Lagos

S/N	Survey Items	Mean Rank	Rank
1.	Accessibility	2.29	1
2.	Usability	1.82	3
3.	Confidence	1.89	2

Source: Researchers' Computations, 2025

Table 7: Chi-Square Results from the Friedman's Test

N	325
Chi-Square	52.323
Df	2
Asymp.sig.	.000

a. Friedman Test
b.

The outcome of analysis from the abovemark the existence of a statistically significant variance in aircraft passengers[accessibility, usability, and confidence; X^2 (2, n=325) = 52.323, p < 0.05]. Importantly, careful examination of the mean estimations indicated a slopy layer in aircraft passengers' accessibility, usability, and confidence adopted among selected airliners from accessibility (2.29) to confidence (1.89), to usability (1.82). The significance of these criteria making up theaircraft passengers' accessibility, usability, and confidence among selected airliners were plainly ranked to give grounds for the aboveclarifications.

H_{03}: Risk control techniques have no effect on aircraft passengers' confidence among selected Airliners in Murtala Muhammed International Airport, Lagos

Table 8: Risk Control Techniques vs Aircraft Passengers' Confidence

Table 8. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.397[a]	.157	.155	1.29951	.157	60.270	1	323	.000

a. Predictors: (Constant), Risk Control Techniques
b. Dependent Variable: Aircraft Passengers' Confidence

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	101.780	1	101.780	60.270	.000[b]
	Residual	545.463	323	1.689		
	Total	647.243	324			

a. Dependent Variable:Aircraft Passengers' Control
b. Predictors: (Constant), Risk Control Techniques

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	2.562	.116		22.157	.000	2.335	2.790
	Risk Control Techniques	.059	.008	.397	7.763	.000	.044	.074

a. Dependent Variable:Aircraft Passengers' Confidence

Source: *Researchers'Computations, 2025*

From the Table 8 results of the regression analysis presented above, it is clear that there is positive relationship between risk control techniques and aircraft passengers' confidence. The model also shows the variations experienced by the dependent variable that could be explained by the independent variable (R square) which shows that risk confidence techniques are responsible for about 15.7 percent of variance in aircraft passengers' confidence. This means that 84.3 percent of the aircraft passengers' confidence enjoyed among selected airliners in Lagos State comes from other factors other than the predictor used in this model (*risk control techniques*). The generalisation of the results (Adjusted R square) indicates that true 15.5 percent of the variation in health safety culture is explained by risk identification techniques (*risk avoidance, risk minimisation, risk retention, and risk transfer).* This result is almost close to reality as the difference between R Square and Adjusted R Square is not high. The standard error fit, which is a measure of the precision of the model, shows how wrong the statistical outcomes could be at 1.3 percent if one uses this model to make real life predictions. The above result is statistically significant as seen in the ANOVA table (*p-value = 0.000*) as it is greater than the 0.05 confidence interval used in this study. A value greater than 1 show that F-ratio yield an efficient model but 60.270 F-ratio indicates that this model is not very efficient.

Conclusion and Recommendations

This study examined the relationship between risk control techniques and aircraft passengers' confidence among selected airliners operating at Murtala Muhammed International Airport, Lagos, Nigeria. The findings point to the vital part that effective risk control measures play in shaping passengers' perceptions of safety, reliability, and overall trust in air transport services. Risk control techniques such as rigorous aircraft maintenance, strict adherence to safety regulations, competent crew training, clear safety communication, and efficient emergency preparedness were found to be central to enhancing passengers' confidence in air travel.

On recommendations, airline operators should prioritise continuous training and retraining for pilots, cabin crew, engineers, and ground staff. This improvement can be achieved by focusing on safety management, emergency response, risk assessment, and customer communication skills, ensuring that professionalism and competence are established, which passengers can trust. Additionally, airlines need to establish clear, transparent, and user-friendly communication strategies regarding safety procedures and risk control measures. By providing effective pre-flight safety briefings, timely updates during delays or disruptions, and accessible safety information, airlines can significantly enhance passengers' perception of safety. Furthermore, airlines operating from Murtala Muhammed International Airport should adopt modern Safety Management Systems (SMS) and data-driven risk monitoring tools. These systems facilitate the early identification, assessment, and mitigation of potential risks, thereby bolstering operational reliability and passenger confidence. The Nigerian Civil Aviation Authority (NCAA) and other aviation regulatory bodies must intensify their efforts to enforce and monitor safety regulations. Conducting strict compliance audits and imposing penalties for violations will help ensure uniform safety standards across all airlines.In conclusion, airlines and airport authorities should regularly conduct emergency drills and simulations that involve all relevant stakeholders. Demonstrating preparedness for emergencies reassures passengers of the airline's capability to effectively manage unforeseen situations.

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